Rachel Seabury Sprague

Education

University of Montana, Missoula, MT

• Ph.D. Fish and Wildlife Biology, Wildlife Biology Program. 2009. *Dissertation:* "Glucocorticoid physiology and behavior during life history transitions in Laysan Albatross (*Phoebastria immutabilis*)."

University of Texas at Austin, Austin, TX

• Graduate (Ph.D.) program in <u>Ecology</u>, <u>Evolution and Behavior</u>, Section of Integrative Biology (54 credits transferred to University of Montana). Completed oral preliminary exams. (Moved with advisor to UM.)

Bowdoin College, Brunswick, ME

- A.B. with coordinate major in Biology and Environmental Studies, minor in French.
- Honors: Graduated Cum Laude in Biology, Deans List.

Experience

Lanai Resorts, LLC, dba Pūlama Lāna'i, Lāna'i City, HI

September 2018 – present

Director of Conservation

- Lead (with co-director/spouse) conservation programs, policy, and priorities for 98% of the island of Lana'i.
- Manage 20+ staff working to protect native and endangered plants and wildlife including critically
 endangered and island-endemic species, improve and restore native habitat and watersheds, control invasive
 plants and predators, manage public hunting and control of game mammals; implement biosecurity
 measures for plant arrivals; and conduct marine debris monitoring and removal.
- Work with federal, state, academic, and private partners to develop and implement research, monitoring, and management of the island's natural resources. Serve as landowner/island representative for major landscapelevel conservation partnerships, statewide working groups, advisory groups, interagency and stakeholder meetings, and legislative task forces.
- Administer department budgets, grant and mitigation funding, and contracts, as well as legal agreements such as memoranda of understanding, right of entry permits for partners, contractor scopes-of-work, and compliance for major projects such as conservation predator-proof fencing.
- Received and maintain state and federal permits for endangered species recovery, wildlife stabilization and rehabilitation, rare plant propagation/out-planting, wildlife depredation and control, and salvage.

Lanai Resorts, LLC, dba Pūlama Lāna'i, Lāna'i City, HI

January 2016 - September 2018

Wildlife Biologist and Wildlife Program Manager

- Developed and led a new wildlife biology program, including research, recovery, and management of wildlife on Lāna'i, program planning, staff supervision, grant writing, and contract management.
- Started standardized monitoring and management actions for native and endangered species such as Hawaiian petrels, wedge-tailed shearwaters, waterbirds, pueo, tree snails, Hawaiian monk seals, and sea turtles; predator control and biosecurity; and marine debris accumulation monitoring and removal.
- Created a landscape-level predator-control program to protect endangered Hawaiian petrels. Largely in response to this program, observed a ~195% increase in apparent reproductive success from 2016 to 2019.
- Received the 2018 Business Leader Award from the State of Hawai'i Invasive Species Council for our work
 protecting seabirds and other native wildlife on Lāna'i from invasive predators, and biosecurity efforts to
 prevent new species introductions to the island.

NOAA Fisheries Pacific Islands Regional Office, Honolulu, HI

Hawaiian Monk Seal Recovery Coordinator Assistant Hawaiian Monk Seal Recovery Coordinator January 2014 – January 2016 September 2010 – January 2014

- Led and coordinated the adaptive and multi-disciplinary Hawaiian Monk Seal Recovery Program, including working with state, federal, military, NGO partners, and other stakeholders to implement the Recovery Plan.
- Facilitated meetings, built agency and stakeholder relationships, represented NOAA at national and international meetings, managed budgets, contracts, and grants, coordinated external communications.
- Identified information gaps, and worked with research program to prioritize science focus and collaborate on various research projects to inform and evaluate species recovery, developed program strategic direction.
- Prepared management plans, technical and regulatory compliance documents, research papers, official agency correspondence, outreach materials, and briefing documents. Reviewed permits and consultations.
- Co-authored book chapter on the role of language in framing and driving human conflict about wildlife.
- Led the writing and stakeholder engagement process for the development and publication of the Main Hawaiian Islands Monk Seal Management Plan.

Institute for Wildlife Studies, San Diego, CA

February 2009 - September 2010

Project Manager, San Clemente Loggerhead Shrike Release Program

- Contractor for the Naval Facilities Engineering Command Southwest leading and supervising a project releasing captive-bred, federally endangered San Clemente Loggerhead Shrikes into the wild on an active U.S. Navy base and training range.
- Hired and supervised crew leader, full-time biologists, and seasonal technicians. Assigned tasks, tracked schedules and progress toward goals for multiple priorities according to a strategic plan.
- Developed and reviewed recovery strategies and conservation plans; represented release program at weekly multi-agency working group meetings with the U.S. Navy, U.S. Fish & Wildlife Service, and San Diego Zoo, and other conservation program project partners.
- Monitored breeding status of captive and released shrikes, conducted behavioral observations and evaluation of different release techniques, provided husbandry and assisted with health evaluations for shrikes.
- Managed budgets, maintained database, and prepared technical written correspondence including weekly, monthly, and annual reports. Analyzed data, prepared conference presentations and peer-reviewed papers.

University of Montana, Wildlife Biology Program, Missoula MT University of Texas at Austin, Section of Integrative Biology, Austin TX

September 2003 – May 2009

Ph.D. Candidate

- Designed and coordinated conservation research within marine wildlife management goals for Kīlauea Point and Midway Atoll National Wildlife Refuges in Hawai'i. Executed complex research program on Laysan Albatross including theoretical, laboratory, and data analyses.
- Independently developed field sites, obtained permits from multiple agencies/jurisdictions, applied for and received grant funding (as PI), managed budgets, coordinated gear needs and logistics.
- Planned and conducted monitoring of seabird nests and behavior, collected timed blood samples and morphological measurements, performed intramuscular injections on several species of seabirds and songbirds.
- Designed and set up solar-powered radio telemetry receiver and data logger system to remotely monitor seabirds.

U.S. Fish & Wildlife Service

December 2004 – January 2005

Midway Atoll National Wildlife Refuge, HI

Volunteer Field Assistant (part-time while conducting graduate research)

Propagated native coastal plants in a greenhouse, transplanted and out-planted native plants, primarily to
conserve and restore wetland habitat for endangered waterbirds. Applied herbicide to control invasive
plants.

U.S. Fish & Wildlife Service

November 2002 - March 2003

French Frigate Shoals, Hawaiian Islands National Wildlife Refuge, HI

Volunteer Field Assistant

- Independently monitored reproductive success plots, conducted surveys, banding, resighting, and data entry for 16 species of seabirds and shorebirds on Tern Island and surrounding islands.
- Conducted island-wide vegetation survey and assisted with eradication of invasive plants. Assisted with monitoring for and freeing entangled endangered Hawaiian monk seals and green sea turtles.

The Nature Conservancy, Maine Chapter, Brunswick, ME

June 2001 - August 2001

Stewardship Field Assistant

- Researched and drafted site conservation plan for a new preserve identifying the conservation targets (including listed and candidate species of birds, bats, other mammals, plants, fish, and invertebrates), possible sources of stress, and conservation action plan for the preserve.
- Planned and conducted ecological surveys and inventories, invasive plant removal, creation of GIS maps of property tracts and ecological information for preserves.

University of Texas at Austin/U.S. Fish & Wildlife Service French Frigate Shoals, Hawaiian Islands National Wildlife Refuge, HI

January 2000 - May 2000

Research Assistant

- Independently managed and collected data for a study of sexual selection and Great Frigatebird reproductive biology. Took blood samples, measurements, and applied bands/wing-tags to adults and juveniles. Daily surveys and behavioral observations of marked birds, nest checks, and sex ratio counts.
- Same volunteer duties as November 2002 March 2003. Also conducted daily nest surveys and measurements of Masked Boobies for long-term reproductive success and chick growth project.

Bowdoin College Scientific Station Kent Island, New Brunswick, Canada

June 1999 – July 1999

Research Assistant

• Captured and banded Leach's Storm-petrels for a long-term reproductive biology study and a study of reproductive success and disturbance tolerance. Conducted an independent study on petrel reproductive investment. Analyzed data and wrote research paper for peer-reviewed publication.

Caretta Research Project

August 1996

Wassaw Island National Wildlife Refuge, Savannah, GA

Volunteer Field Assistant

• Conducted beach surveys and data collection for nests and hatching of loggerhead sea turtles.

Professional Affiliations and Service

- National Wildlife Federation Board of Directors Region 12 Director (Hawai'i, California, Nevada, Guam; 2019-present)
- Pacific Seabird Group Chair-elect (2021-present)
- Conservation Council for Hawai'i Board of Directors (state affiliate of NWF) At-large (2022), President (2019-2021), Affiliate Representative to NWF (2017-2018), Vice President (2018), Secretary (2017).
- The Wildlife Society (member of National, Western Section, and Hawai'i Chapter):
 - Western Section Executive Board Past-president (2017), President (2016), President-Elect (2015),
 Annual Conference Chair (2016, Theme: *Digging into the Roots of Conservation Conflict*), Hawai'i Chapter Representative (2013-2015, 2018).
 - o Hawai'i Chapter Board of Directors President (2013-2015), Vice President (2012-2013), at-large director (2016-2019).

Awards

Community Partnership Award – Lanai Cat Sanctuary

2019

For Pūlama Lāna'i's commitment to save native birds and cats through collaboration and partnership.

Business Leader Award - Hawai'i Invasive Species Council

2018

For protection of seabirds and other native species through predator control and invasive species control, and biosecurity efforts to minimize invasive species introductions to Lāna'i.

NOAA On-the-Spot Award – *NOAA Fisheries Pacific Islands Regional Office* 2012 For exceptional handling of a special assignment for the Marine Mammal Commission.

Outstanding Teaching Award

2008

University of Montana College of Forestry and Conservation

Honorable Mention-Best Student Paper (poster)

2007

Pacific Seabird Group Annual Meeting

Honorable Mention-Best Student Paper (oral)

2006

Pacific Seabird Group Annual Meeting

Publications

- **Raine, A.F.** and R.S. Sprague. In review. Observations of leucistic 'ua'u (Hawaiian petrel, *Pterodroma sandwichensis*) on Lāna'i, Hawai'i. *Marine Ornithology*.
- Sprague, R.S. and M.M. Draheim. 2015. Hawaiian Monk Seals: Labels, Names, and Stories in Conflict. In: M.M. Draheim, F. Madden, J.B. McCarthy, and E.C.M. Parsons (eds.), *Human-Wildlife Conflict: Complexity in the Marine Environment*. Oxford University Press: Oxford.
- **Sprague, R.,** C. Littnan, and J. Walters. 2013. Estimation of Hawaiian monk seal consumption in relation to ecosystem biomass and overlap with fisheries in the main Hawaiian Islands. U.S. Dep. Commer., NOAA Tech. Memo., NOAA-TM-NMFS-PIFSC-37, 42 p. + Appendices.
- Breuner, C.W., **R.S. Sprague**, S.H. Patterson, and H.A. Woods. 2013. Environment, behavior and physiology: do birds use barometric pressure to predict storms? *J Exp Biol* 216(11):1982-1990.
- **Sprague, R.S.** and C.W. Breuner. 2010. Timing of fledging is influenced by glucocorticoid physiology in Laysan Albatross chicks. *Hormones and Behavior* 58:297-305.
- Sprague, R.S., M.B. Maley, A.S. Bridges, and D.K. Garcelon. 2010. San Clemente Loggerhead Shrike Release Program–2009, Final Report. U.S. Navy, Environmental/Natural Resources Management Branch, Southwest Div., Nav. Fac. Eng. Command, San Diego, California.
- Fidorra, J.C., R.S. Sprague, A.M. Easley, M.B. Maley, A.S. Bridges, and D.K. Garcelon. 2009. San Clemente Loggerhead Shrike Release Program–2008, Final Report. U.S. Navy, Environmental/Natural Resources Management Branch, Southwest Div., Nav. Fac. Eng. Command, San Diego, California.
- Harada, T., T. Deguchi, B. Zaun, **R.S. Sprague**, and J. Jacobs. 2008. An artificial rearing experiment of Laysan Albatross chicks. *Journal of the Yamashina Institute for Ornithology* 39:87-100.
- Breuner, C.W., S.E. Lynn, G.E. Julian, J.M. Cornelius, B.J. Heidinger, O.P. Love, **R.S. Sprague**, H. Wada, and B.A. Whitman. 2006. Plasma binding globulins and acute stress response. *Hormones and Metabolic Research* 38:260-268.
- Seabury, R.E., D.W. Hall, and G.B. Pauly. 2005. Geographic distribution. *Bufo woodhousii. Herpetological Review* 36:198
- Wheelwright, N.T. and **R.E. Seabury**. 2003. Fifty:fifty offspring sex ratios in Savannah Sparrows (*Passerculus sandwichensis*). *Auk* 120:171-179.

More than 100 invited and contributed presentations at professional conferences, academic lectures, public lecture series, workshops, community and volunteer groups, talk story sessions with fishermen, public hearings, etc. (full list available upon request).

Professional Trainings

Advanced Application of Conservation Conflict Transformation

Center for Conservation Peacebuilding, Washington DC - 40 hours

March 2019

Hazardous Waste Operations and Emergency Response (HAZWOPER) April 2018

Kim Beasley, Clean Islands Council, Honolulu, HI – 24 hour (2016) + 8 hour refresher annually since

Helicopter Transport of External Cargo (A-219)

October 2017

Timmy Bailey, Interagency Aviation Training, Lanai City, HI - 8 hours

Basic Aviation Safety (A-100)

October 2017

Timmy Bailey, Interagency Aviation Training, Lanai City, HI – 5 hours

Wildlife First Responder and Avian Stabilization

July 2016

Samantha Christie, Hawaii Wildlife Center, Hawi, HI - 19 hours + 5 hour refresher in 2017 and 2018

Wildlife Disease Workshop

November 2016

Dr. Thierry Work, USGS National Wildlife Health Center, Honolulu, HI – 8 hours

Introduction to Incident Command System (ICS-100)

June 2016

ICS for Single Resources and Initial Action Incident (ICS-200)

FEMA Emergency Management Institute, online – 4 hours

Aviation Water Ditching and Survival (A-312)

August 2014

David Kreutzer, Interagency Aviation Training, Schofield Barracks, HI – 8 hours

ESA Section 4 (Endangered Species Listing)

June 2014

Marta Nammack and Angela Somma, NMFS HQ Staff, Honolulu, HI - 24 hours

Community-based Social Marketing

March 2014

Dr. Doug McKenzie-Mohr, Environmental Psychologist, Honolulu, HI – 8 hours

Transforming Stakeholder Conflict at the Human-Animal Interface

March 2013

Human Wildlife Conflict Collaboration, Oakland, CA – 40 hours

Marine Mammal Handling & Husbandry

March 2013

The Marine Mammal Center, Sausalito, CA – 32 hours (emphasis on phocids)

Advanced ESA Section 7 (Interagency Consultations)

April 2012

Craig Johnson, NMFS Section 7 Coordinator, Honolulu, HI – 24 hours

Conservation Conflict Resolution

November 2011

Human Wildlife Conflict Collaboration at The Wildlife Society Annual Conference, Kona, HI – 4 hours

Using Social Media for Outreach and Education

November 2011

The Wildlife Society Annual Conference, Kona, HI – 4 hours

Unexploded Ordnance Field Safety

2009, 2010

Explosive Ordnance Disposal Mobile Unit-3 Detachment SW Coronado, Coronado, CA - 4 hours

Tactical Combat Casualty Care (modified)

2010

Branch Medical Naval Auxiliary Landing Field San Clemente Island, San Clemente Island, CA – 8 hours

SCUBA Open Water Certification

2005

SSI/Tom's Dive and Swim, Austin, TX - 28-hour

Teaching Experience

University of Montana, Division of Biological Sciences, Missoula, MT University of Texas at Austin, School of Biological Sciences, Austin, TX Teaching Assistant

January 2007 - December 2008 September 2003 - May 2006

• Discussion and lab sections for Vertebrate Natural History, Ornithology, Animal Behavior, and Ecology.

U.S. Fish & Wildlife Service, Kilauea Point NWR, Kauai, HI

Park Ranger Intern May 2007 - July 2007 March 2003 - May 2003

• Ecological and historical interpretation for 600-800 daily visitors and school groups, assisted with fee collection, facilities and exhibit maintenance, and day-to-day operation of the Visitor Services program.

TeachMaine AmeriCorps Program, Wolfe's Neck Farm, Freeport, ME September 2001 - September 2002 Environmental Educator

• Led programs for students K-12 and families on sustainable agriculture, farming, and coastal salt marsh and forest ecology. Obtained grant funding for service learning projects, and developed science-based service learning program for high school credits. Directed and supervised summer camp programs and staff.

Interests & Activities

Hiking, Birding, Traveling, Reading, Cooking, Outrigger Canoe Racing, Standup Paddle-boarding, SCUBA